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| EXAMINER |
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| BALAOING, ARIEL A |

| ART UNIT | PAPER NUMBER |
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| 2683 | |

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/823,251 | JEWETT, DAVID T. |
| | Examiner | Art Unit | |
| | Ariel Balaoing | 2683 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on <u>*13 April 2005*</u>.
2a) ☐ This action is **FINAL**.     2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) *1-30* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-30* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>*13 April 2005*</u> is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.      Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

3.      Claim 30 recites the limitation "the calibration server" in line 2 of the claim.  There

is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 102*

4.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

5.      Claims 15-25 are rejected under 35 U.S.C. 102(e) as being anticipated by RILEY

et al (US 2003/0125045 A1).

Regarding claim 15, RILEY discloses a method for updating a network of location

systems (abstract), comprising: maintaining a base station almanac for each of a

plurality of position determining entities (paragraph 96-101), wherein the base station

almanac is used to process location assertions (paragraph 96-101); developing a new

base station almanac for each of the plurality of position determining entities (Figures 11, 12; paragraph 96-101); synchronizing updates of the new base station almanac for each of the plurality of position determining entities (paragraph 96-101); and processing additional location assertions using the new base station almanac (paragraph 96-101).

Regarding claim 16, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the method for updating a network of location systems is performed at a time selected from the group consisting of a predetermined time interval, after a predetermined number of samples, and on demand from a data management service user (paragraph 96-101).

Regarding claim 17, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the synchronizing updates is performed by a method selected from the group consisting of: setting a predetermined time in the future when an update should occur (paragraph 96-101; updates are made periodically); defining a predetermined event in the future when the update should occur (paragraph 96-101; system operator can determine when update occurs); and simultaneously sending an update signal to the plurality of position determining entities (paragraph 96-101; data redundancy is established for the PDEs).

Regarding claim 18, RILEY discloses a method for calibrating a network of location systems (abstract), comprising: developing a current position assertion database by collecting a plurality of location assertions for each of a plurality of position determining entities (paragraph 42, 74, 96-101); maintaining a latency calibration record comprising a current base station latency estimate for each of the plurality of position

determining entities (paragraph 42, 74, 96-101); developing a new base station latency

estimate by analyzing the current position assertion database in relation to the latency

calibration record for each of the plurality of position determining entities (paragraph 42,

74, 96-101); synchronizing updates of the latency calibration record for each of the

plurality of position determining entities (paragraph 42, 74, 96-101); refining the latency

calibration record using the new base station latency estimate for each of the plurality of

position determining entities (paragraph 42, 74, 96-101).

Regarding claim 19, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. RILEY further discloses further comprising

repeating the previous steps to further refine the latency calibration record for each of

the plurality of position determining entities (paragraph 96-101).

Regarding claim 20, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. RILEY further discloses wherein the plurality of

location assertions are received from at least one mobile communication device

transmitting a location assertion (paragraph 5, 36-38, 66, 71).

Regarding claim 21, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. RILEY further discloses wherein the plurality of

location assertions comprises: a global positioning system location estimate; and a

range estimate (paragraph 5, 36-38, 66, 71).

Regarding claim 22, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. RILEY further discloses wherein the range

estimate is derived from a method selected from the group consisting of advanced

forward link trilateration, enhanced observed time difference, and observed time difference of arrival (paragraph 5, 36-38, 66, 71).

Regarding claim 23, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the new base station latency estimate is derived from the plurality of location assertions and forward link calibration data, sector center data, and sector position data in the latency calibration record (paragraph 8, 41, 62-63).

Regarding claim 24, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the method for calibrating a network of location systems is performed at a time selected from the group consisting of a predetermined time interval, after a predetermined number of samples, and on demand from a data management service user (paragraph 96-101).

Regarding claim 25, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the synchronizing updates is performed by a method selected from the group consisting of: setting a predetermined time in the future when an update should occur (paragraph 96-101; updates are made periodically); defining a predetermined event in the future when the update should occur (paragraph 96-101; system operator can determine when update occurs); and simultaneously sending an update signal to the plurality of position determining entities (paragraph 96-101; data redundancy is established for the PDEs).

*Claim Rejections - 35 USC § 103*

6.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.      The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.     Determining the scope and contents of the prior art.
    2.     Ascertaining the differences between the prior art and the claims at issue.
    3.     Resolving the level of ordinary skill in the pertinent art.
    4.     Considering objective evidence present in the application indicating
           obviousness or nonobviousness.

8.      Claims 1-14, 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable

over RILEY et al (US 2003/0125045) in view of MOEGLEIN et al (US 2005/0020309).

Regarding claim 1, RILEY discloses a method for calibrating a location system

(abstract), comprising: receiving at least one location assertion from at least one mobile

communication device (paragraph 5, 36-38); and updating a latency calibration record

comprising a current base station latency estimate for a base station (paragraph 38-42,

74), wherein the updating comprises: developing a new base station latency estimate by

analyzing the at least one location assertion in relation to the latency calibration record

(paragraph 38-42, 74); and refining the latency calibration record using the new base

station latency estimate (paragraph 38-42, 74). However, RILEY does not expressly

disclose wherein the base station estimate is for a base station controller. MOEGLEIN

discloses wherein the base station estimate is for a base station controller (750-Figure

7; paragraphs 140-143). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify RILEY to provide the base station latency estimate to the base station controller, as taught by MOEGLEIN, as the base station controller inherently performs the various processing and control functions for the base station. Also, it is well known in the art that Base Station Subsystems (BSS) include both a Base Station Transceiver (BTS) and Base Station Controller (BSC) wherein the BTS collects information for processing at the BSC.

Regarding claim 2, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses further comprising periodically repeating the receiving and updating (paragraph 96-101).

Regarding claim 3, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the at least one location assertion comprises: a global positioning system location estimate (paragraph 5, 36-38); and a range estimate (paragraph 5, 36-38).

Regarding claim 4, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the range estimate is derived from a method selected from the group consisting of advanced forward link trilateration, enhanced observed time difference, and observed time difference of arrival (paragraph 5, 35-38).

Regarding claim 5, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the new base station latency estimate is derived from the at least one location assertion and forward

link calibration data, sector center data, and sector position data in the latency

calibration record (Figure 14-16; paragraph 5, 36-38).

Regarding claim 6, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. RILEY further discloses wherein the method for

calibrating a location system is performed at a time selected from the group consisting

of a predetermined time interval, after a predetermined number of samples, and on

demand from a data management service user (paragraph 96-101).

Regarding claim 7, see the rejections of the parent claim concerning the subject

matter this claim is dependent upon. RILEY further discloses further comprising

evaluating the new base station latency estimate for at least one additional base station

affiliated with the latency calibration record (paragraph 74, 81-84; Forward Link

Calibration data from nearby sectors is taken into account). However, RILEY does not

specifically disclose wherein the base station estimate is for a base station controller.

MOEGLEIN discloses wherein the base station estimate is for a base station controller

(750-Figure 7; paragraphs 140-143). Therefore it would have been obvious to a person

of ordinary skill in the art at the time the invention was made to modify RILEY to provide

the base station latency estimate to the base station controller, as taught by

MOEGLEIN, as the base station controller inherently performs the various processing

and control functions for the base station.

Regarding claim 8, RILEY discloses a method for calibrating a location system

(abstract), comprising: receiving at least one location assertion from at least one mobile

communication device (paragraph 5, 36-38); developing a current position assertion

database [almanac] by collecting a plurality of received location assertions (paragraph 96-101); and updating a latency calibration record comprising a current base station latency estimate for a base station (paragraph 38-42, 74), wherein the updating comprises: developing a new base station latency estimate by analyzing the at least one location assertion in relation to the latency calibration record (paragraph 38-42, 74); and refining the latency calibration record using the new base station latency estimate (paragraph 38-42, 74). However, RILEY does not expressly disclose wherein the base station estimate is for a base station controller. MOEGLEIN discloses wherein the base station estimate is for a base station controller (750-Figure 7; paragraphs 140-143). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify RILEY to provide the base station latency estimate to the base station controller, as taught by MOEGLEIN, as the base station controller inherently performs the various processing and control functions for the base station. Also, it is well known in the art that Base Station Subsystems (BSS) include both a Base Station Transceiver (BTS) and Base Station Controller (BSC) wherein the BTS collects information for processing at the BSC.

Regarding claim 9, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses further comprising periodically repeating the receiving and updating (paragraph 96-101).

Regarding claim 10, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the at least one

location assertion comprises: a global positioning system location estimate (paragraph 5, 36-38); and a range estimate (paragraph 5, 36-38).

Regarding claim 11, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the range estimate is derived from a method selected from the group consisting of advanced forward link trilateration, enhanced observed time difference, and observed time difference of arrival (paragraph 5, 35-38).

Regarding claim 12, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the new base station latency estimate is derived from the at least one location assertion and forward link calibration data, sector center data, and sector position data in the latency calibration record (Figure 14-16; paragraph 5, 36-38).

Regarding claim 13, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the method for calibrating a location system is performed at a time selected from the group consisting of a predetermined time interval, after a predetermined number of samples, and on demand from a data management service user (paragraph 96-101).

Regarding claim 14, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses further comprising evaluating the new base station latency estimate for at least one additional base station affiliated with the latency calibration record (paragraph 74, 81-84; Forward Link Calibration data from nearby sectors is taken into account). However, RILEY does not

specifically disclose wherein the base station estimate is for a base station controller.

MOEGLEIN discloses wherein the base station estimate is for a base station controller

(750-Figure 7; paragraphs 140-143). Therefore it would have been obvious to a person

of ordinary skill in the art at the time the invention was made to modify RILEY to provide

the base station latency estimate to the base station controller, as taught by

MOEGLEIN, as the base station controller inherently performs the various processing

and control functions for the base station.

Regarding claim 26, RILEY discloses a location calibration system (abstract),

comprising: at least one mobile communication device; at least one base transceiver

system for receiving at least one location assertion from the at least one mobile

communication device (11-15 Figure 1; paragraph 5, 36-38); a position determining

entity for collecting and storing in a current position assertion database a plurality of

location assertions transmitted from the base station (41 Figure 3, 11; 122, 123 Figure

12); a latency calibration record stored in the position determining entity comprising a

current base station latency estimate (41 Figure 3, 11; 122, 123 Figure 12; paragraphs

96-101); and a data management server for creating a new latency calibration record

using the current base station latency estimate and the current position assertion

database and distributing the new latency calibration record to the position determining

entity (43 Figure 3; paragraphs 96-101). However, RILEY does not expressly disclose a

base station controller for receiving the at least one location assertion from the at least

one base transceiver system. MOEGLEIN discloses a base station controller for

receiving the at least one location assertion from the at least one base transceiver

system (750-Figure 7; paragraphs 140-143). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify RILEY to provide the base station latency estimate to the base station controller, as taught by MOEGLEIN, as the base station controller inherently performs the various processing and control functions for the base station. Also, it is well known in the art that Base Station Subsystems (BSS) include both a Base Station Transceiver (BTS) and Base Station Controller (BSC) wherein the BTS collects information for processing at the BSC.

Regarding claim 27, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the at least one location assertion comprises: a global positioning system location estimate (paragraph 5, 36-38); and a range estimate (paragraph 5, 36-38).

Regarding claim 28, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the range estimate is derived from a method selected from the group consisting of advanced forward link trilateration, enhanced observed time difference, and observed time difference of arrival (paragraph 5, 35-38).

Regarding claim 29, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. RILEY further discloses wherein the new base station latency estimate is derived from forward link calibration data, sector center data, and sector position data in the latency calibration record and the at least one location assertion (Figure 14-16; paragraph 5, 36-38).

Regarding claim 29, see the rejections of the parent claim concerning the subject matter this claim is dependent upon.  RILEY further discloses further comprising a mobile positioning center for receiving the new latency calibration record from the calibration server (36 Figure 3).

## Conclusion

9.    The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

MISIKANGAS (US 20040176108 A1) - Location applications for wireless networks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ariel Balaoing whose telephone number is (571) 272-7317.  The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 AM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872.  The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free).


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